

U.S. Application No.: 10/752,801
AMENDMENT B

Attorney Docket: 4011.001

Remarks

Review and reconsideration of the Office Action of March 8, 2006, is respectfully requested in view of the above amendments and the following remarks.

Applicant has amended the Claims to overcome the Examiner's rejection. Care has been taken to ensure that no new matter is added to the claims. Support for the amendment to Claims 1, 3, 4, 7 and 9 are found in paragraphs [00011], [00021], [00029], [00030] and [00031], and in the claims. Support for new claims 14 and 15 can be found in paragraphs [00030] and [00031].

Present Invention

The present invention is a plastisol composition that is a mixture of a polymer, Grandlure, dichlorvos a plasticizer and a thickener, formed into a solid matrix sheet, after having been cured in an oven, the composition allows the active components of the composition to be released over a sustained period of time. The solid matrix sheet of the plastisol composition operates as a slow release delivery system for use in the monitoring and the control of cotton boll weevils and other insects that over-winter or inhabit crop and nearby non-crop areas where host crops are present and not present.

Office Action

Turning now to the Office Action in greater detail, the paragraphing of the Examiner is adopted.

Election/Restriction

The Examiner did not find Applicant's amendments and arguments in response to the restriction requirement in the Office Action of October 19, 2005 persuasive. The Examiner finalized his restriction requirement, restricting claims 7 and 12 as amended, and added claim 8 as a restricted claim.

Further, the Examiner stated that since the restriction is between product claims (Claims 1 - 6, 9 -11 and 13) and process claims (Claims 7, 8 and 12), and if the product claims are allowed, the process claims may be rejoined.

Applicant acknowledges the Examiner's findings and comments.

Rejection of Claims 1- 4, 6, 9 - 11, & 13

The Examiner rejected claims 1-4, 6, 9-11, & 13 under 35 U.S.C. 102(b) as being anticipated by Smith et. al (U.S. Pat No. 5,888,930).

Alternatively, the Examiner rejects Claims 1-4, 6, 9-11, & 13 under 35 U.S. C. 103(a) as being obvious over Smith et. al (U.S. Pat No. 5,888,930). Applicant notes that the Examiner has cited a single reference, Smith in his obviousness rejection. Applicant concludes, from the Examiner's comments, that the Examiner is of the opinion that that the invention of Claims 1-4, 6, 9-11, & 13 is "within the realm of public knowledge" and that routine experimentation by one of ordinary skill would have led someone to the use of the particular chemical recited in

Applicant's claimed composition. Therefore, the Examiner has concluded that Applicant's composition is obvious, even though the results obtained by the composition are unexpectedly high.

Applicant traverses this rejection.

Applicant reviewed the Smith reference and noted that the invention, as claimed, loads microporous beads, made from various polymers, with an active ingredient, then suspends the loaded beads in aqueous emulsion and then the beads within the emulsion is sprayed onto vegetation. Throughout the specification and the claims in the Smith invention, emphasis is placed on the fact that the beads have a porous structure that includes small pores near the surface and progressively larger pores toward the interior core of the bead. (Column 2, lines 51-52) Additionally, according to claims 1, microporous beads, having no rate-controlling membrane wall applied are loaded with **at least one** active ingredient selected from the group consisting of a pheromone, an insect growth regulator and an insecticide. Even in the Examples set out by Smith in the specification, only one active ingredient is loaded into the bead after bead formation. Also, Smith only claims the loading of one active ingredient. The methods of loading the bead with the one active ingredient are set out in Column 4 lines 1- 15, Column 6 lines 25 - 36 and lines 48 - 57.

On page 3 of the Office Action the Examiner stated that in Column 7 line 1-23, the Smith patent teaches "vapor-releasing insecticides, dichlorvos, with boll weevil pheromone, Grandlure, in a polymeric matrix in pellet or bead form. Applicant made a

thorough review of the Smith patent; paying close attention to the bead formations set out in Column 3 lines 1-67 and noted that there is no mention of the bead being a matrix, but a continuously-graded asymmetric pore structure. Additionally, the bead is made **solely** of film forming polymers that do not include active ingredients, such as vapor-releasing insecticides, dichlorvos, with boll weevil pheromone, Grandlure, in the formation process of the bead. The active ingredients can only be added to the bead by various loading process, and only after the bead is formed.

The Examiner is directed to the fact that Applicant's invention is not a porous bead that has to be loaded with the active ingredient. Applicant's invention is a composition that was created by combining in a mixture, a polymer, Grandlure, dichlorvos, a plasticizer and a thickener, then curing the mixture in an oven at temperatures from 100 to 300 degrees Fahrenheit until a solid matrix was formed. The solid matrix composition allows for a controlled and sustained release of the Grandlure. The Grandlure attracts the weevils and the vapor from the dichlorvos kills the weevils. Specifically, the dichlorvos speeds up the release of Grandlure from the matrix, while the plasticizer slows the release of the Grandlure. The divergent forces of the dichlorvos and the plasticizer acting on the Grandlure creates a condition wherein the active ingredients are released over a sustained period of time giving it a longer life than just using a pheromone and an insecticide in separate dispensers. There is no teaching in the Smith

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reference, that when combined with the realm of public knowledge suggests the solid matrix composition of Applicant invention.

The Examiner is reminded of the following holding from the court in Rexnord v. Laitram, 6 USPQ2d 1817, 1823 (E.D. Wis. 1988)

The Federal Circuit has made it quite clear that an essential aspect of the obviousness inquiry is the problem with which the inventor was presented and what others of skill in the art would have done at that time faced with the same problem. Further, to support an obviousness rejection, it is necessary to show that one of ordinary skill in the art, absent the teaching of the present application, the artisan would have found the claimed invention to have been obvious in light of the teaching of the references.

Applicant's invention could not have been created by a person of ordinary skill in the art after studying the teachings in the Smith patent, in light of the technology know in the public at the time. Only through experimentation and testing was the Applicant able to develop his composition. A composition that replaces the need for two dispensers in a trap, that is a dispenser with an attractant and a dispenser with a second active ingredient, such as an insecticide or growth regulator. Further, Applicant's composition has a longer life due to its sustained release period, which reduces the number of trips made to the field to change the dispenser.

Further, in response to the 35 U.S.C. 102(b) portion of the Examiner's rejection, Applicant amended Claims 1, 9 and 13 the independent claims. Each of these claims, as amended has features that are not claimed or taught by the Smith reference. Specifically, the fact that the composition is a mixture of the polymer and the active ingredients formed into a solid matrix and not a polymer structure that is formed separately and apart from the active ingredients.

For the reasons set out above, withdrawal of the rejection is respectfully requested.

Rejection of Claims 1, 2, & 5

The Examiner rejected Claims 1, 2, and 5 under 35 U.S.C. 102(b) as being anticipated by Wright et. al (U.S. Pat No. 5,413,784).

Applicant traverses this rejection as it relates to Claims 1 and 2.

From the statement of the Examiner, it appears that the Examiner is focusing more on the combination of Claims 1, 2 and 5.

In response, applicant canceled Claim 5 with this response. With Claim 5 canceled, Applicant compared the invention as set out in Claims 1 and 2 with the invention of Wright. Applicant states that Claim 1 Applicant's invention is completely different from any of the Wright claims. Applicant's claimed invention, the composition formed into a solid matrix for attracting boll weevil, which is a plastisol composition that is

a mixture of a polymer, Grandlure, dichlorvos and a thickener, differs completely from a biopesticide composition comprised of a fungus, feeding stimulant and pheromone.

Therefore, for the reasons set out above, withdrawal of the rejection is respectfully requested.

Rejection of Claims 1, 2, 4 - 6, 9 - 11 & 13

The Examiner rejected Claims 1, 2, 4 - 6, 9 - 11 & 13 under 35 U.S.C. 102(b) as being anticipated by McKibben (U.S. Pat No. 6,183,733). Further, the Examiner stated that Applicant's invention, as claimed, is set out in Column 6 line 50 and Column 7 line 18 of the McKibben patent. Lastly, the Examiner stated that McKibben's Claim 24 is equivalent to Applicant's Claims 9 and 10.

Applicant traverses the rejection.

In response, Applicant has amended the claims to overcome the Examiner's rejection. Specifically, Claims 1, 9 and 13 are each amended to clearly show that the **composition containing the mixture of a polymer, a thickener, a weevil pheromone and a vapor releasing insecticide are formed into a solid matrix for attracting and killing weevils**. In addition to amending the claims, Applicant states that the invention as claimed by McKibben is different from Applicant's invention.

One of the main differences between the two inventions is that the McKibben patent uses the **plant volatiles (kairomone) eugenol (Claim 1) and myrcene (Claim 24)**. Plant volatiles are one of McKibben's essential active ingredients as is discussed

extensively in the McKibben patent in Column 3 lines 62- 72; and Column 4 lines 1-64. Also, each of McKibben's independent Claims 1, 10, 15, 18, 24 and 25 contain a plant volatile. Plant volatiles function like a Grandlure, in that they attract boll weevils, but according to McKibben the purpose of the plant volatiles is to enhance the effectiveness of the Grandlure. In McKibben the Grandlure and plant volatiles are combined because this composition is more attractive to the boll weevil. The inclusion of a plant volatile cannot be overlook as an important part of McKibben's composition.

Another difference between McKibben and Applicant's invention is that the Applicant does not use just any organophosphate as an insecticide but uses a vapor releasing insecticide that has a vapor that is toxic to weevils. McKibben provides a laundry list of possible insecticides that can possibly be used. Additionally, it is clear from Column 7 lines 41 - 43, that McKibben only had in mind insecticides that had to be ingested by the weevil in order for killing to occur. The only way a person skilled in the art could determine which insecticide to use in Applicant's composition is via experimentation.

A further difference between McKibben and Applicant's invention is the type of plasticizer being used. The Examiner references the fact that cotton seed oil is used as a plasticizer by McKibben. Specifically, the Examiner is referring to the embodiment of McKibben mention in Column 7 lines 13 - 18. Applicant states that cotton seed oil is a

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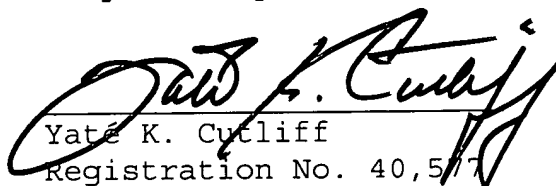
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phthalate ester having a chemical formula of $C_{17}H_{24}O_4$. Applicant uses the phthalate ester, butyl benzyl phthalate, which has a chemical formula of $C_{19}H_{20}O_4$, which is completely different from cotton seed oil. Further, the product produced by the process set out by McKibben, in the specification portion of his patent, is soft enough to have a friable surface that insects can chew and ingest the active ingredients. Applicant's solid matrix is not soft and friable.

Therefore, withdrawal of the rejection is respectfully requested for the reasons set out above

All claims are now in condition for allowance. Favorable consideration and early issuance of the Notice of Allowance are respectfully requested. Should further issues remain prior to allowance, the Examiner is respectfully requested to contact the undersigned at the indicated telephone number.

Respectfully submitted,


Yaté K. Cutliff
Registration No. 40,577

YATÉ K. CUTLIFF
Attorney at Law
P.O. Box 15095
St. Petersburg, FL 33733-5095
(727) 327 - 6246

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CERTIFICATE OF MAILING

I hereby certify that the foregoing AMENDMENT B and postcard for U.S. Application No. 10/752,801 filed January 7, 2004, was deposited in first class U.S. mail, with sufficient postage, addressed: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 7, 2006.


Yate K. Outliff